

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
United States Patent and Trademark
Office
Box PCT
Washington, D.C.20231
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing: 05 October 2000 (05.10.00)	
International application No.: PCT/GB00/00818	Applicant's or agent's file reference: A25762 WO
International filing date: 07 March 2000 (07.03.00)	Priority date: 31 March 1999 (31.03.99)
Applicant: FENTON, Christopher, John et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International preliminary Examining Authority on:
12 July 2000 (12.07.00)☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer: J. Zahra Telephone No.: (41-22) 338.83.38
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PATENT COOPERATION TREATY

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INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference A25762 WO	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/GB 00/ 00818	International filing date (day/month/year) 07/03/2000	(Earliest) Priority Date (day/month/year) 31/03/1999
Applicant BRITISH TELECOMMUNICATIONS PUBLIC LIMITED COMPANY		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the International search was carried out on the basis of the International application in the language in which it was filed, unless otherwise indicated under this item.



the International search was carried out on the basis of a translation of the International application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the International application, the International search was carried out on the basis of the sequence listing :



contained in the International application in written form.



filed together with the International application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the International application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (see Box II).

4. With regard to the title,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the abstract,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this International search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

5



as suggested by the applicant.



None of the figures.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

INTERNATIONAL SEARCH REPORT

National Application No
PCT/GB 00/00818

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04M3/42 H04M3/54

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 577 110 A (AQUINO MARINO K) 19 November 1996 (1996-11-19) column 1, line 34 -column 2, line 44 figure 1 ---	1-3,7,8, 11-13, 15,18
A	US 5 537 467 A (CHENG ET AL) 16 July 1996 (1996-07-16) column 3, line 31 -column 4, line 60 ---	1-20
A	US 4 899 373 A (LEE CHINMEI C ET AL) 6 February 1990 (1990-02-06) column 1, line 36 - line 55 claims 2,3,5-7 ---	1-20
A	US 5 353 331 A (EMERY ET AL) 4 October 1994 (1994-10-04) abstract -----	1-20

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

18 April 2000

Date of mailing of the international search report

28/04/2000

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 00/00818

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5577110	A	19-11-1996	CA 2114273 A,C CN 1100864 A EP 0622936 A JP 6334755 A SG 46204 A	27-10-1994 29-03-1995 02-11-1994 02-12-1994 20-02-1998
US 5537467	A	16-07-1996	CA 2198215 A EP 0777944 A JP 2952306 B JP 9510851 T WO 9606498 A	29-02-1996 11-06-1997 27-09-1999 28-10-1997 29-02-1996
US 4899373	A	06-02-1990	CA 1277791 A GB 2198011 A,B JP 1712621 C JP 3079907 B JP 63151156 A	11-12-1990 02-06-1988 27-11-1992 20-12-1991 23-06-1988
US 5353331	A	04-10-1994	WO 9318606 A US 5469496 A US 5579379 A US 5506887 A US 5664005 A US 5610972 A US 5758281 A US 6011975 A	16-09-1993 21-11-1995 26-11-1996 09-04-1996 02-09-1997 11-03-1997 26-05-1998 04-01-2000

REC'D 31 MAY 2001

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference A25762 WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB00/00818	International filing date (day/month/year) 07/03/2000	Priority date (day/month/year) 31/03/1999
International Patent Classification (IPC) or national classification and IPC H04M3/42		
Applicant BRITISH TELECOMMUNICATIONS PUBLIC LIMITED COMPANY		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 7 sheets, including this cover sheet.

- ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 8 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☒ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 12/07/2000	Date of completion of this report 29.05.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Tillgren, M Telephone No. +49 89 2399 7497 

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB00/00818

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

5-10 as originally filed

1-4 as received on 07/05/2001 with letter of 02/05/2001

Claims, No.:

1-21 as received on 07/05/2001 with letter of 02/05/2001

Drawings, sheets:

1/6-6/6 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB00/00818

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application.
- ☒ claims Nos. 21.

because:

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):
- ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☐ no international search report has been established for the said claims Nos. .

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

- ☐ the written form has not been furnished or does not comply with the standard.
- ☐ the computer readable form has not been furnished or does not comply with the standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB00/00818

1. Statement

Novelty (N)	Yes:	Claims	2, 3, 9, 12, 13, 19
	No:	Claims	1, 4-8, 10, 11, 14-18, 20
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-20
Industrial applicability (IA)	Yes:	Claims	1-20
	No:	Claims	

2. Citations and explanations see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB00/00818

Re Item III

- 1) No opinion regarding novelty, inventive step or industrial applicability has been established regarding claim 21 since it is not self contained but relies on reference to the description and the drawings (Rule 6.2(a)).

Re Item V

- 1) The steps described in independent claim 1 are all a part of Mobile IP as it is described in D2 where a user registers with a visitor node which sends information about the user and itself to a home node of the user, which home node is located in the home network of the user, wherein the visitor node is registered as a proxy for the user to receive all traffic intended to the user in his home network, and wherein the home node routes the traffic intended for the user to the visitor node.

Hence claim 1 does not fulfill the requirements of Article 33(2) PCT since its subject matter is not novel.

- 2) All features of independent claims 2 and 3 except for the fact that the visited networks are fixed networks are well known from the handling of billing in connection with roaming in GSM where billing data is sent to the home network of a visiting customer for later billing of that customer (see for instance D1 chapter 8).

The objective problem to be solved is therefore how to implement "routing" in a fixed network, e.g. PSTN. It is well known in the art to have this kind of routing in a fixed network (see for instance D2). If a kind of "routing" is desirable in a fixed network of the telecommunications type, the art of mobile telephony, e.g. GSM, has to be considered the most obvious source of solutions to the problems of billing and routing that can occur also in a fixed network. Therefore it has to be considered obvious to the man skilled in the art to use the teachings of D1 also in a fixed network and arrive at the subject matter of claims 2 and 3.

Hence claims 2 and 3 do fulfill the requirements of Article 33(2) PCT but not those of Article 33(3) PCT since their subject matter is novel but does not involve an inventive step.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB00/00818

- 3) Regarding claims **4-8 and 10** their respective subject matter are known from or at least rendered obvious by D1. The visitor node comprises a visitor switching means and a visitor location database (claim 4) is well known from the use of a VLR (and possible a MSC) in GSM: the user is assigned a temporary routing number (claim 5) this is the from GSM well known Mobile Station Routing Number (MSRN): to allow a further user of the network (claim 6) is well known from GSM: The use of call forwarding (claim 7) is well known in the art of telecommunication: to assign the user a second identification number (claim 8) is also well known from GSM (compare Temporary Mobile Identification Number TMSI): To supply billing information from the visited network to the home network (claim 10) is also well known from billing of roaming in GSM.

Hence claims 4-8 and 10 do not fulfill the requirements of Article 33(2) PCT since their subject matter is not novel.

- 4) Regarding claim 9 the mere manual input of the second identification number is of an implementational nature and does not make a contribution to an inventive step. Therefore claim 9 does fulfill the requirements of Article 33(2) PCT but not those of Article 33(3) PCT since its subject matter is novel but does not involve an inventive step.
- 4) The features of apparatus claims 11-20 correspond to those of method claims 1-10. Therefore the above identified deficiencies also concern claims 11-20.

Re Item VI

- 1) Documents used to establish prior art not cited in the International Search Report:
D1= The GSM System for Mobile Communications, a comprehensive overview of the European Digital Cellular Systems, 1992, Mouly and Pautet (International Standard Book Number: 2-9507190-0-7)
D2= The IETF RFC number 2002, october 1996, C. Perkins , Editor

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB00/00818

Re Item VII

- 1) Independent claims 1 and 11 are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with known features (see D1 and D2) being placed in the preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).

Said claims should therefore have been redrafted accordingly.

- 2) Reference signs in parentheses should have been inserted in the claims to increase their intelligibility (Rule 6.2(b) PCT). This also applies to method claims in as far as they refer to apparatus or flow chart features.
- 3) To meet the requirements of Rule 5.1(a)(ii) PCT, the documents D1 and D2 should have been identified in the description.

Mobility Management

The present invention relates to mobility management within a communications system.

The re-directing of a call to a user-specified telephone, whether fixed or mobile, is known as call-forwarding. Call-forwarding is especially useful when trying to contact a user who is on the move in a fixed telephone network, where telephones, rather than people, are ascribed numbers. In one example, the user is given a "personal" telephone number. The user directs the network to forward all calls made to the personal number to a particular fixed telephone (the "borrowed" telephone). When the user moves, the user instructs the network to forward calls to a new fixed telephone. An example of a call-forwarding service in the United Kingdom is British Telecommunications plc's Flexinumber™ service. Not only can this service be used to forward calls within the UK, but it can be used to forward calls to another network located in another country such as the United States of America.

However, personal numbering has several limitations. Firstly, the personal number can only be used to receive calls. The user must make other arrangements if he wishes to make calls and does not want to burden the owner of the "borrowed" telephone with the cost of his calls. To provide full mobility, the personal number must allow the user to make calls from a "borrowed" telephone and for the calls to be charged to the personal number account. Secondly, the user is always tied to his home network. The user may, temporarily, want to use the services provided by a foreign service provider, in a foreign network, as if he were a subscriber to the foreign service provider.

According to the present invention, there is provided a method of providing a user of a home network with use of a visited network, the method comprising registering the user with the visited network, including supplying a visitor node which is located in the visited network with the identity of a user-selected terminal and a first identification number for
5 identifying the user and a home node which is located in the home network, and registering the visitor node as a proxy with the home node so as to allow routing by the home node of a call intended for the user to the user-selected terminal.

The visitor node may comprise a visitor switching means and a visitor location database.

The user-selected terminal may be assigned a temporary routing number.

10 The method may further provide a further user of the home network with use of the visited network and a call intended for the further user may be routed to the user-selected terminal.

The visited network may be a public switched telephone network and the method may include supplying a visitor node with the identity of a user-selected terminal comprising
15 providing the telephone number of a terminal attached to the visited network.

The method may further comprise supplying the user with a second identification number for enabling the user to use the visited network and for enabling the visitor node to record the use of the visited network by the user.

20 The enabling the user to use the visited network may comprise the user dialling the second identification number and a destination terminal number for making a call to the destination terminal.

The recorded use of the visited network is supplied to the home node for the purposes of billing.

25 According to the present invention there is also provided a method of configuring a home network to provide a user of the home network, who is assigned a user number, use of a

visited network, the method comprising receiving from a visitor node located in the foreign network, its identity, storing and associating the identity of the visitor node with the user number and receiving billing data from the visitor node for the charging the user.

5 According to the present invention there is further provided a method of configuring a visitor node to provide a user of a home network use of a visited network in which the visited node is located, the method comprising receiving an identification number for identifying the user and a home node which is located in the home network, requesting and receiving confirmation of registration with the home node and sending to the home node billing data arising from the user's use of the visited network.

10 According to the present invention there is further provided apparatus for providing a user of a home network with use of a visited network, comprising a visited network and a home network, a user-selected terminal connected to the visited network; means for registering the user with the visited network, a visitor node located in the visited network, means for supplying the visitor node with the identity of the user-selected terminal and a first
15 identification number for identifying the user; a home node located in the home network, and means for registering the visitor node as a proxy with the home node so as to allow routing by the home node of a call intended for the user to the user-selected terminal.

According to the present invention there is further provided a telephone network configurable as a home network to provide a user of the home network, who is assigned a
20 user number, use of a visited network, the network comprising means for receiving, from a visitor node located in another network, its identity; means for storing and associating the identity of the visitor node with the user number; and means for receiving billing data from the visitor node for charging the user.

25 According to the present invention there is further provided a node in a telephone network configurable as a visited node to provide a user of another, home, network use of the network in which the visited node is located, the node comprising means for receiving an identification number for identifying the user and a home node located in the home network, means for requesting and receiving confirmation of registration with the home

node and means for sending to the home node billing data arising from the user's use of the visited network.

An embodiment of the present invention will now be described, by way of example, with reference to the accompanying drawings, in which:-

- 5 Figure 1 is a schematic diagram of a communications system comprising a home and a visited network and a process by which a user "attaches" himself to the visited network;
- Figure 2 is a schematic diagram of the internal structure of a home node;
- Figure 3 is a schematic diagram of the internal structure of a visitor node;
- Figure 4 is a process flow diagram of a user attaching to a visited network;
- 10 Figure 5 is a schematic diagram of a user-terminated call process;
- Figure 6 is a schematic diagram of a user-originated call process;
- Figure 7 is a schematic diagram of a user detaching from a visited network and
- Figure 8 is a process flow diagram of a user detaching from a visited network.

Referring to Figure 1, a communications system comprises a home network 1 and a visited
15 network 2. In this example, both networks are public switched telephone networks (PSTNs). A user 3 is registered with a home service provider which provides services through the home network 1. In this example, the home service provider is the same the network operator, for instance British Telecommunications plc, though this need not be the case. In this example, the service provider provides a voice service to the user 3. The
20 user 3 is also assigned a personal number for call forwarding.

The home service provider has a home node 4, located within the home network 1.

Referring to Figure 2, the home node 4 comprises a reference profile register 5 which holds subscription details for subscribers registered to use services, billing data and data relating to foreign networks. The home node 4 also comprises a home gateway switching centre 6
25 to provide routing access to the home network 1 and an authentication centre 7 to validate the authenticity of users. Other service providers may also have home nodes of their own or may share. The home network 1 also comprises a first home network exchange 8, which is one of a plurality of exchanges distributed throughout the home network 1.

Claims

1. A method of providing a user of a home network with use of a visited network, the method comprising registering the user with the visited network, including supplying a visitor node which is located in the visited network with the identity of a user-selected terminal and a first identification number for identifying the user and a home node which is located in the home network, and registering the visitor node as a proxy with the home node so as to allow routing by the home node of a call intended for the user to the user-selected terminal.
2. A method of configuring a home network to provide a user of the home network, who is assigned a user number, use of a visited network, the method comprising receiving, from a visitor node located in the foreign network, its identity; storing and associating the identity of the visitor node with the user number and receiving billing data from the visitor node for charging the user.
3. A method of configuring a visitor node to provide a user of a home network use of a visited network in which the visited node is located, the method comprising receiving an identification number for identifying the user and a home node which is located in the home network, requesting and receiving confirmation of registration with the home node and sending to the home node billing data arising from the user's use of the visited network.
4. A method according to claim 1 or 3 wherein the visitor node comprises a visitor switching means and a visitor location database.
5. A method according to either claim 1, 2, 3, or 4 wherein the user-selected terminal is assigned a temporary routing number.
6. A method according to any preceding claim further providing a further user of the home network with use of the visited network, wherein a call intended for the further user is routed to the user-selected terminal.
7. A method according to any preceding claim wherein the visited network is a public switched telephone network and including supplying a visitor node with the

identity of a user-selected terminal comprising providing the telephone number of a terminal attached to the visited network.

8. A method according to any preceding claim further comprising supplying the user with a second identification number for enabling the user to use the visited network and for enabling the visitor node to record the use of the visited network by the user.

9. A method according to claim 8 wherein in order to enable the user to use the visited network the user dials the second identification number and a destination terminal number for making a call to the destination terminal.

10. A method according to either claim 8 or 9 wherein the recorded use of the visited network is supplied to the home node for the purposes of billing.

11. Apparatus for providing a user of a home network with use of a visited network, comprising a visited network and a home network, a user-selected terminal connected to the visited network; means for registering the user with the visited network, a visitor node located in the visited network, means for supplying the visitor node with the identity of the user-selected terminal and a first identification number for identifying the user; a home node located in the home network, and means for registering the visitor node as a proxy with the home node so as to allow routing by the home node of a call intended for the user to the user-selected terminal.

12. A telephone network configurable as a home network to provide a user of the home network, who is assigned a user number, use of a visited network, the network comprising means for receiving, from a visitor node located in another network, its identity; means for storing and associating the identity of the visitor node with the user number; and means for receiving billing data from the visitor node for charging the user.

13. A node in a telephone network configurable as a visited node to provide a user of another, home, network use of the network in which the visited node is located, the node comprising means for receiving an identification number for identifying the user and a home node located in the home network, means for requesting and receiving

confirmation of registration with the home node and means for sending to the home node billing data arising from the user's use of the visited network.

14. Apparatus according to claim 11 or 13 wherein the visitor node comprises a visitor switching means and a visitor location database.

5 15. Apparatus according to any of claims 11, 13 or 14 wherein the visited network is a public switched telephone network and includes means for supplying the visitor node with the identity of a user-selected terminal by providing the telephone number of a terminal attached to the visited network.

10 16. Apparatus according to claim 11, 12, 13, 14 or 15 comprising means for assigning the user-selected terminal is assigned a temporary routing number.

17. Apparatus according to any of claims 11 to 16 having means for providing a further user of the home network with use of the visited network, comprising means for allowing calls intended for the further user is routed to the user-selected terminal.

15 18. Apparatus according to any of claims 11 to 17 further comprising means for supplying the user with a second identification number for enabling the user to use the visited network, and means for enabling the visitor node to record the use of the visited network by the user.

20 19. Apparatus according to claim 18 comprising means to enable a user to use the visited network, comprising means for receiving dialled data indicative of the second identification number and the destination terminal number.

20. Apparatus according to either claim 18 or 19 comprising means for transmitting recorded use of the visited network to the home node from the visited node for the purposes of billing.

25 21. A method substantially as herein described with reference to Figures 1 to 8 of the accompanying drawings